

In the Claims

Claims 1-49 are canceled.

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DIP

50. [Currently Amended] A wireless communication device comprising:  
-a housing including an upper surface, a lower surface, and at least one side intermediate the upper surface and the lower surface and having a dimension less than smallest dimensions of the upper surface and the lower surface, and the at least one side surface having visibly perceptible indicia thereon;  
communication circuitry within the housing and the communication circuitry being configured to communicate wireless signals comprising microwave signals individually having a frequency in excess of about 900 MHz; and  
wherein the communication circuitry comprises radio frequency identification device circuitry.

51. [Original] The device according to claim 50 wherein the housing comprises an encapsulant which contacts the communication circuitry.

52. [Original] The device according to claim 50 wherein the at least one side surface has a dimension less than about 100 mils.

53. Canceled.

here 54. [Currently Amended] A wireless communication device comprising:

a substrate having a support surface defined by a perimetral edge;  
communication circuitry elevationally over the support surface of the substrate and  
configured to communicate wireless signals comprising microwave signals; and  
an encapsulant elevationally over the support surface and configured to encapsulate  
at least portions of the support surface of the substrate and the communication circuitry,  
and wherein the encapsulant and the substrate respectively define an upper surface and  
a lower surface and have a thickness less than a smallest dimension of the perimetral  
edge, and the encapsulant includes visibly perceptible indicia intermediate the upper  
surface and the lower surface.

54 55. [Original] The device according to claim 54 wherein the support surface  
comprises a surface substantially in the shape of a rectangle.

56. [Original] The device according to claim 54 wherein the encapsulant contacts  
at least portions of the support surface and the communication circuitry.

57. [Original] The device according to claim 54 wherein the encapsulant and the  
substrate have a thickness less than about 100 mils.

54 { 58. [Original] The device according to claim 54 wherein the communication circuitry comprises radio frequency identification device circuitry.

59. [Original] A wireless communication device comprising:  
communication circuitry configured to communicate wireless signals; and  
an encapsulant configured to encapsulate and contact at least a portion of the communication circuitry, wherein the encapsulant defines at least one side surface and the at least one side surface has visibly perceptible information thereon.

60. [Previously Presented] The device according to claim 59 wherein the at least one side surface of the encapsulant has a thickness less than about 100 mils.

61. [Original] The device according to claim 59 wherein the communication circuitry comprises radio frequency identification device circuitry.

62. [Currently Amended] A radio frequency identification device comprising:  
a housing including an upper surface and a lower surface which define a housing thickness of less than about 100 mils intermediate the lower surface and the upper surface, and the housing has visibly perceptible indicia thereon intermediate the upper surface and the lower surface; and

communication circuitry within the housing and configured to communicate wireless signals comprising microwave signals.

63. [Original] The device according to claim 62 wherein the housing comprises an encapsulant which contacts at least portions of the support surface and the communication circuitry.

64. [Original] The device according to claim 62 further comprising an antenna within the housing and coupled with the communication circuitry.

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65. [Currently Amended] A radio frequency identification device comprising:  
a substrate having a support surface;  
radio frequency identification device circuitry elevationally over the support surface and configured to communicate wireless signals comprising microwave signals;  
a power source elevationally over the support surface and coupled with the radio frequency identification device circuitry, wherein the power source comprises a battery;  
an antenna elevationally over the support surface and coupled with the radio frequency identification device circuitry; and  
an encapsulant contacting at least portions of the support surface, the radio frequency identification device circuitry, the power source and the antenna, wherein the encapsulant and the substrate form a housing having an upper surface and a lower surface

interconnected by at least one side surface, and the at least one side surface has a dimension less than smallest dimensions of the upper and lower surfaces, and the at least one side surface includes visibly perceptible indicia.

66. [Currently Amended] A method of forming a wireless communication device comprising:

providing communication circuitry configured to communicate wireless signals;  
providing a housing including an upper surface, a lower surface and at least one side surface about the communication circuitry, the at least one side surface has a dimension less than smallest dimensions of the upper surface and the lower surface;  
providing visibly perceptible indicia on the at least one side surface; and  
wherein the providing communication circuitry comprises providing radio frequency identification device circuitry configured to communicate microwave wireless signals.

67. [Original] The method according to claim 66 wherein the providing the housing comprises encapsulating at least a portion of the communication circuitry with an encapsulant.

68. [Original] The method according to claim 67 wherein the encapsulating comprises contacting at least the encapsulated portion of the communication circuitry with the encapsulant.

69. [Original] The method according to claim 66 wherein the at least one side surface has a dimension less than about 100 mils.

70. Canceled.

71. [Original] A method of forming a wireless communication device comprising:  
providing a substrate having a support surface defined by at least one perimetral edge;  
providing communication circuitry elevationally over the support surface of the substrate and configured to communicate wireless signals;  
encapsulating at least portions of the support surface of the substrate and the communication circuitry using an encapsulant, the encapsulant and the substrate respectively define an upper surface and a lower surface and have a thickness less than a smallest dimension of the at least one perimetral edge; and  
providing visibly perceptible indicia on the encapsulant intermediate the upper surface and the lower surface.

72. [Original] The method according to claim 71 wherein the providing the substrate comprises providing the substrate having a substantially rectangular shape.

73. [Original] The method according to claim 71 wherein the encapsulating comprises contacting at least the encapsulated portions of the support surface of the substrate and the communication circuitry with the encapsulant.

74. [Original] The method according to claim 71 wherein the encapsulant and the substrate have a thickness less than about 100 mils.

75. [Original] The method according to claim 71 wherein the providing communication circuitry comprises providing radio frequency identification device circuitry.

76. [Original] A method of forming a wireless communication device comprising:  
providing communication circuitry configured to communicate wireless signals;  
encapsulating at least a portion of the communication circuitry with an encapsulant which contacts at least the encapsulated portion of the communication circuitry, the encapsulant forming at least one side surface; and  
providing visibly perceptible indicia upon the at least one side surface of the encapsulant.

77. [Original] The method according to claim 76 wherein the at least one side surface of the encapsulant has a dimension less than about 100 mils.

circuit  
antenna

78. [Original] The method according to claim 76 wherein the providing communication circuitry comprises providing radio frequency identification device circuitry.

79. [Currently Amended] A method of forming a radio frequency identification device comprising:

providing radio frequency identification device circuitry configured to communicate wireless signals comprising microwave signals;

providing a housing including an upper surface, a lower surface, and at least one side surface about the communication circuitry, the at least one side surface having a dimension less than about 100 mils; and

providing visibly perceptible indicia on the at least one side surface.

80. [Original] The method according to claim 79 wherein the providing the housing comprises providing an encapsulant over at least a portion of a support surface of a substrate.

81. [Original] The method according to claim 80 wherein the encapsulant contacts at least portions of the support surface and the radio frequency identification device circuitry.



best 82. [Currently Amended] A method of forming a radio frequency identification device comprising:

providing radio frequency identification device circuitry configured to communicate wireless signals comprising microwave signals;

coupling a power source with the radio frequency identification device circuitry;

coupling an antenna with the radio frequency identification device circuitry;

providing a housing including an upper surface, a lower surface and at least one side surface about at least portions of the radio frequency identification device circuitry, the power source and the antenna, the at least one side surface having a dimension less than smallest dimensions of the upper surface and the lower surface; and

providing visibly perceptible indicia on the at least one side surface.

83. [Original] The device according to claim 50 wherein the communication circuitry is configured to implement backscatter communications.

84. [Original] The device according to claim 50 further comprising a battery coupled with the communication circuitry.

85. [Original] The device according to claim 54 wherein the communication circuitry is configured to implement backscatter communications.

86. [Previously Presented] The device according to claim 54 further comprising a battery coupled with the communication circuitry.

87. [Previously Presented] The device according to claim 59 wherein the communication circuitry is configured to implement backscatter communications.

88. [Previously Presented] The device according to claim 59 further comprising a battery coupled with the communication circuitry.

89. [Previously Presented] The device according to claim 62 wherein the communication circuitry is configured to implement backscatter communications.

90. [Previously Presented] The device according to claim 62 further comprising a battery coupled with the communication circuitry.

91. [Previously Presented] The method according to claim 66 wherein the providing communication circuitry comprises providing backscatter communication circuitry.

92. [Previously Presented] The method according to claim 66 further comprising electrically coupling a battery with the communication circuitry.

93. [Previously Presented] The method according to claim 71 wherein the providing communication circuitry comprises providing backscatter communication circuitry.

94. [Previously Presented] The method according to claim 71 further comprising electrically coupling a battery with the communication circuitry.

95. [Previously Presented] The method according to claim 76 wherein the providing communication circuitry comprises providing backscatter communication circuitry.

96. [Previously Presented] The method according to claim 76 further comprising electrically coupling a battery with the communication circuitry.

97. [Previously Presented] The method according to claim 79 wherein the providing the radio frequency identification device circuitry comprises providing backscatter circuitry.

98. [Previously Presented] The method according to claim 79 further comprising electrically coupling a battery with the radio frequency identification device circuitry.

99. [Previously Presented] A wireless communication device comprising:

a housing including an upper surface, a lower surface, and at least one side intermediate the upper surface and the lower surface and having a dimension less than smallest dimensions of the upper surface and the lower surface, and the at least one side surface having visibly perceptible indicia thereon; and

communication circuitry within the housing and the communication circuitry being configured to communicate wireless signals;

wherein the communication circuitry is configured to implement backscatter communications.

100. [Previously Presented] A method of forming a wireless communication device comprising:

providing communication circuitry configured to communicate wireless signals;

providing a housing including an upper surface, a lower surface and at least one side surface about the communication circuitry, the at least one side surface has a dimension less than smallest dimensions of the upper surface and the lower surface; and

providing visibly perceptible indicia on the at least one side surface;

wherein the providing communication circuitry comprises providing backscatter communication circuitry.

101. [New] The device according to claim 50 further comprising a transmit antenna configured to transmit microwave signals and a receive antenna configured to receive microwave signals.

102. [New] The device according to claim 51 further comprising:  
an antenna coupled with the communication circuitry and configured to communicate the wireless signals; and

a substrate comprising different material than the encapsulant, and wherein the encapsulant and the substrate encapsulate an entirety of the communication circuitry and the antenna.

103. [New] The device according to claim 54 wherein the substrate and the encapsulant comprise different materials.

104. [New] The device according to claim 54 wherein the substrate and the encapsulant form a solid mass substantially free of any void space.

105. [New] The device according to claim 54 further comprising an antenna coupled with the communication circuitry and configured to communicate the wireless signals, and wherein the substrate and the encapsulant encapsulate an entirety of the communication circuitry and the antenna.

106. [New] The method according to claim 66 wherein the providing the housing comprises:

providing a substrate;  
flowing a flowable encapsulant over the substrate; and  
curing the flowable encapsulant into a solid mass substantially free of any void space.

107. [New] A method of forming a radio frequency identification device comprising:

providing a substrate;  
printing a conductive trace over a surface of the substrate, the conductive trace providing at least one antenna;  
supporting backscatter communication circuitry using the substrate;  
coupling the backscatter communication circuitry with the at least one antenna in an arrangement wherein the backscatter communication circuitry controls selective shorting of the at least one antenna to selectively reflect a continuous wave signal having a microwave frequency to implement backscatter communications;  
supporting a battery using the substrate;  
coupling the battery with the backscatter communication circuitry; and  
providing an encapsulant over the substrate to form a housing having a thickness no greater than about 100 mils, the providing the encapsulant comprising encapsulating

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S/N: 09/524,804  
Amdt. Dated 11/17/2003  
Office Action dated 7/16/2003

the conductive trace, the backscatter communication circuitry and the battery using the encapsulant and the substrate to form a solid radio frequency identification device substantially free of any void space.

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